found. The mucosa was almost entirely destroyed, being replaced by a structureless substance enclosing leucocytes, and here and there the remains of a follicle. These remains are shown under a high power in Fig. 8, in which it will be seen that the epithelium lining the follicle is beginning to be detached. The submucosa appeared much thickened, and the fibrous tissue abundant and more than usually solid in consistence. The walls of the vessels were also thickened, altogether denoting a more chronic process than in the other parts of the intestinal tract. The muscular layer was thinned. The cæcum and rectum showed no changes. Other sections were stained with methyl blue in order to search for micro-organisms. As is usual with sections of intestine, some were found, but they were not more numerous than usual, and no distinctive grouping could be made out.

The pathological changes described by Dr. Wethered are not only new but explain, in an unexpected way, some of the most important symptoms of the disease. Their importance will be best appreciated by those who have had the care of patients suffering from it abroad and in this country. An œsophagus entirely stripped of its lining epithelium and its glandular structures, and an ileum in which the absorbing and secreting surface is practically useless, constitute pathological changes of the greatest gravity and suggestiveness. We now understand how it is that patients complain not only of tenderness of the tongue and mouth, but find great difficulty in swallowing hot or acrid substances. Some of my patients have suffered great distress from their inability to swallow certain kinds of food, and one unfortunate sufferer often spent hours in endeavouring to hawk up morsels of bread which neither would go down nor up, and which, in the light of what we now know, probably stuck in pockets of the gullet unlubricated by the mucus which is needed to smooth the passage of the bolus. Another patient, in whom it was impossible to find a tender spot anywhere else, always complained of a certain uneasiness when the fingers were pressed firmly upwards under the sternum in the direction of the gullet, and occasionally complained of a choking sensation when attempts were made to swallow solid food.

So little seems to be known of the exact changes which take place in the ileum in the process of digestion that it is very difficult *a priori* to understand what the effect would be of the practical obliteration of that part of the gut, but it is quite certain that such a large extent of surface must perform functions of a very important kind. Here again, as in the case of the œsophagus, the pathological changes bear out the results of clinical observation. As the stomach, liver, and pancreas were unaffected, digestion must have taken place in the first instance, but as soon as the bolus descended to the ileum further digestion, at all events in so far as it depended directly on the condition of that gut, would be arrested. As regards absorption, not only is the absorbing vascular surface practically destroyed, but the sub-mucous connective tissue is converted into a thick sclerotic layer which must have interfered with the absorbing functions of any of the deeper vessels that may have remained. Not only so, but the thick coating of mucoid-like substance that covered the free surface of the bowel must have prevented the contact of the contents with the mucosa, such as it was. The result of such a condition must interfere directly with assimilation and nutrition, and these are functions which are profoundly affected in this disease.

The bolus, by the time that it has reached the ileum, has acquired, at all events in the centre, an acid reaction which, to some extent, must be neutralised by the alkaline succus entericus. The destruction of the crypts of the ileum must therefore lead to the failure of the supply of this alkaline juice, and the acidity must by so much be increased, and possibly also the chemical constituents of the bowel contents. With this condition we may with probable justice associate the frothy fermenting appearance of the stools. The large masses of feculent discharge passed by some patients it is also fair to attribute to the want of absorption in the ileum.

Nothing has been discovered in this or in any other case to account for the peculiar pathological changes described, but their wide extent suggests some morbid agent acting from the free surface, leading to a chronic and low form of congestion of the superficial blood vessels with consequent gradual destruction of the epithelial structures. It is not to be forgotten that in the stomach, with its acid secretion, no destruction had taken place. The fact that the stomach, duodenum, and, to some extent, the jejunum, with the liver and pancreas, are practically uninjured accounts

for the long duration, with alternating improvement and relapses, that characterises the history in many of these cases. The acute relapses of diarrhoea to which these patients are all liable after recovery is also explained by the condition of the ileum, because it is probable that even in cases in which apparently good recovery has taken place the membrane, with its vessels, is to some extent permanently impaired, and therefore is easily affected by the ordinary causes of intestinal catarrh.

Space will not at present allow me to pursue the subject further. Before long I hope to resume its consideration, more particularly in its practical aspect. I would only now remark that the fresh knowledge which has been gathered shows how necessary it is that patients who acquire this disease should recognise its gravity in its early stages, and sacrifice everything towards seeking recovery in good climates and by appropriate treatment. On the other hand, I think we ought to recognise that in cases which appear to be hopelessly affected attempts should be made to render what remains of life less painful, and to humour idiosyncrasies more perhaps than has hitherto been done.

NOTE ON MESENTERIC AND OMENTAL CYSTS.

By SIR SPENCER WELLS, BART., F.R.C.S.,
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A VERY able paper by Dr. Rasch, read last November at the Obstetrical Society, on a Case of Large Chylous Cyst of the Mesentery, and published in the 31st volume of the *Transactions* of that Society, induces me to bring before the profession notes of two cases which have occurred in my practice since the publication, in 1885, of my last work on *Abdominal Tumours*. In that work there is a short chapter on Mesenteric, Omental, and Pancreatic Cysts, and on Undescended Testicle, with some account of a case where I opened and drained a mesenteric cyst, and of another where I removed, in 1882, a solid mesenteric tumour as large as an adult head. Although this tumour proved to be a sarcoma, the lady remains, eight years after the operation, in good health.

Dermoid Mesenteric Cyst.—The first of the two cases I now record bears some resemblance to Dr. Rasch's case of chylous cyst, but it contained fatty or stearoid matter, instead of chyle, and I have scarcely a doubt that it was congenital. The patient was an unmarried girl, aged 19, whom I saw in October, 1888, with Mrs. Garrett Anderson, who was disposed to regard a central fluctuating abdominal tumour as a large hydatid tumour of the liver. Dulness extended from the lower edge of the liver downwards for about four inches below the umbilicus. Thence to the pubes there was resonance, and vaginal examination excluded the idea of any pelvic tumour. Both flanks were clear on percussion. The cyst or tumour could be pushed rather freely from side to side, not at all upwards or downwards. This and the rather doubtful fluctuation, and absence of hydatid fremitus, or any sign of liver disease, were against the supposition of hydatid disease of the liver, and the history pointed to some congenital tumour of the mesentery or omentum. It was, therefore, arranged that I should make an exploratory incision, and I did so on October 21st, 1888, commencing in the middle line just below the umbilicus, and carrying it downwards for about three inches. On opening the peritoneum and pushing aside a coil of intestine, the mesentery appeared in cyst-like form, and yellowish-white in colour. On dividing the mesentery and holding the edges of the opening carefully forward so that none of the contents could escape into the peritoneal cavity, yellowish semi-solid fatlike matter escaped. More was pressed out, and some bundles of fine hair were also removed by the fingers. Then the cavity, which extended backwards quite down to the spine or root of the mesentery, was thoroughly cleansed by fine sponges. On considering the question of drainage, the difficulty of keeping such a large deep cavity thoroughly aseptic, and the doubt whether reaccumulation would or would not take place, it was decided not to drain, but to close the wound, including the opening in the mesenteric sac with the peritoneal edges of the opening in the abdominal wall. The fatty matter removed weighed six pounds. Some of it was kindly examined for me, at St. Thomas's Hospital, by Mr. Shattock, who reported it to be "a

mass of flattened epithelial cells with a considerable amount of fatty material amongst them. There are a few hairs present as well. Treatment with solution of osmic acid turns the substance black from the amount of fat in it. There can be no doubt that it has come from a dermoid cyst."

There is little to remark on the progress after operation except that there was sickness on the first and second day, and more fever for three or four days than usual after antiseptic abdominal sections, the temperature once reaching 103.2°, and the pulse 124; but by the seventh day, when the sutures were removed, the general condition was good, and the pulse and temperature hardly above the normal standard. The wound healed perfectly without discharge of any kind, and when the patient left London for Manchester there was no evidence of any refilling of the cyst. Her father wrote to me on November 20th, that she had borne the journey well, and I did not hear from him again until June, 1883, when he wrote that there "comes from the wound a very slight discharge of matter." I directed them to use a little iodoform and boracic lint as dressing, and did not hear again until October, 1889, when her father wrote that she "keeps very well," but that on the scar there was "a small portion of flesh, like a very small bladder, with a very small hole, out of which a very little matter comes now." The dressing was continued and a pad and bandage worn. The general health was good.

On May 21st, 1890, I saw her in London, in excellent health, with no signs discoverable of anything abnormal in the abdomen, except the cicatrix below the umbilicus with a projection of the upper part of it, very thin, like a small umbilical hernia, the size of a large grape. The skin, or cicatricial tissue, was very thin and easily pressed back, and at the upper part was a pin-hole opening through which a little matter was said to escape occasionally. I directed the use of iodoform to be continued, and a firm pad or plug of cotton wool to be well supported by plaster and a bandage. The general health was so good, and the discharge so very slight, that I postponed any idea of closing the hernial opening by stitches.

Omental Cyst.—On May 4th, 1888, a little girl, aged 4, was taken to Dr. Ransom, of Nottingham, who has favoured me by the following copy of notes taken by him on that day. "Her mother says she has had a large abdomen from early infancy, and that it has increased for the last twelve months. She suffered from affection of the abdomen five months ago, which was then called infantile remittent fever. At that time she had abdominal pains, but no diarrhoea. Now she is a pale, delicate looking child, not well nourished, but not seemingly ill. Complains—through her mother—of being soon fatigued, and of an increasing swelling of the belly. On examination one finds the abdomen prominent chiefly below the navel, and the prominent area is dull on percussion and fluctuating. On being examined standing, and in profile, the outline is as shown in Fig. A. When lying on the back, although the flanks bulge and the anterior face of abdomen about the navel is rather flat, yet the fluctuation and dullness are confined to the pelvic and hypogastric areas, as shown in the shaded parts of Fig. B. The conclusion was arrived at that there was a thin liquid in a thin walled cyst, probably ovarian."

A
Vertical.

B
Horizontal Supine.

Soon after the above notes were taken the child was brought, by Dr. Ransom's advice, to see me in London, and after consultation with him by letter I drew off all the fluid, about 3 pints, by a very fine trocar and aspirator. The fluid was little more than

water, with a mere trace of albumen, and no evidence of hydatids; when empty no remnant of cyst wall could be felt. Considerable relief followed, and she was taken back to Nottingham after three or four days.

Dr. Ransom's notes of subsequent progress are as follows:—

"June 13th, 1888. The cyst was tapped by Sir Spencer Wells about four weeks ago, and now it is filling again somewhat. She has a little pain, feels poorly, is rather fretful, and has an evening temperature of 100°; appetite impaired; bowels confined. Rest and gentle laxatives enjoined.

"September 21st, 1888. After last report she improved somewhat, but of late has been languid and pale. The swelling of belly is greater, and the cyst seems decidedly fuller. An operation for removal was advised."

I saw her again to consider the question of removal, and it was arranged with the parents that, as soon as Dr. Ransom thought the pressure of the fluid was doing harm, I should remove the cyst. It filled very slowly, and she was pretty well all through the autumn and winter of 1888. In February, 1889, Dr. Ransom wrote to me that "the cyst is certainly not tight, but it is bigger and the child suffers; I think you will have to remove the cyst some day."

Increase of the abdomen went on, but very slowly, and it was not until June 4th, 1889, that I operated, proceeding exactly as I should have done for a unilocular extraovarian cyst, Dr. Day administering methylene and Mr. Doran assisting me. On dividing the abdominal wall before opening the peritoneum, this bulged forward between the divided edges of integument, as if there was free dark fluid in the peritoneal cavity or in a very thin-walled cyst. After drawing the peritoneum carefully forwards, the latter proved to be the case. There was no free peritoneal fluid, but a very thin cyst-like expansion of the omentum was adherent in the right iliac fossa to the abdominal wall and to the cæcum and appendix cæci. The fluid was clear and watery, like that removed at the tapping, and measured rather more than 4 pints. When it was empty I proceeded to free the cyst, or the sac-like distended portion of omentum, from its adhesions. This was troublesome and took several minutes to do. In the upper part of the omentum there were a few small cyst-like collections of fluid like grapes. Some of these were removed after ligature and division of the sort of pedicle formed by the part of the omentum which had been adherent. Others above the site of ligature were simply pricked and emptied. The wound was closed as in ovariotomy.

Very little pain or sickness followed the operation, and only slight fever. In about a fortnight the patient returned to Nottingham. Her father wrote to me in November, 1889, enclosing a photograph to show how well the child was looking, and saying: "She eats, drinks, and sleeps well, and romps about in a very different way to what she used to." Dr. Ransom wrote to me, May 26th, 1890: "The child has been quite well ever since the operation."

Dr. Ransom's son made a careful examination of the cyst-like portion of omentum removed, and will probably send his report for publication. I would advise anyone interested in the mode of formation of these mesenteric and omental cysts to refer to Dr. Rasch's paper already referred to, and the interesting discussion to which it led, to Mr. Doran's valuable papers in the 23rd volume of the *Obstetrical Transactions*, and the 68th volume of the *Medico-Chirurgical Transactions*, and to Mr. Lockwood's first Hunterian Lecture published in the *JOURNAL*, June 15th, 1889.

INSANITY CURED BY INFLUENZA.—In a recent number of the *Neurologisches Centralblatt*, Dr. Metz records the case of a man, aged 30, who had suffered from mental disease since the summer of 1888. In February, 1889, he became affected with delirium of persecution, and was so violent that he had to be placed in confinement. At the beginning of the present year there was an outbreak of influenza in the asylum. The patient in question was attacked on January 13; on the 17th he wrote a rational letter to his wife, giving a clear and coherent account of all that had occurred since he had become insane. He dated the recovery of his mental lucidity from the day on which he was attacked with influenza. On February 9th he was discharged cured.

NAVY UNION.—The Navy Guardians have reduced the salary of medical officer to the workhouse from £100 to £80 per annum, and £5 as consulting sanitary officer. A vacancy has arisen in consequence of the death of the late Dr. Nolan.